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REPORT OF THE JOINT COMMITTEE ON PROJECTS
AND CORRELATION OF RESEARCH, 1928^{1/}



The name of our committee is the Joint Committee on Projects and Correlation of Research. As the title indicates, it is a joint committee composed of representatives of the U. S. Department of Agriculture and the State experiment stations. Its function is to bring about closer attention to the correlation and coordination of investigations in the experiment stations and in the Federal Department of Agriculture, and to stimulate cooperation where advantageous. To a considerable extent correlation and cooperation go hand in hand and imply a certain measure of coordination; cooperation can not be successfully achieved without correlation. The subject is one of growing importance. The committee made a special report on cooperation in 1920, and it has repeatedly promoted every reasonable effort on the part of station workers to bring about a better cooperation.

With the passage of the Purnell Act and the appointment of research committees to definitely plan for a combined attack on problems of national importance, the subject of cooperation received unusual impetus. Many of the essentials of such joint effort have been worked out. Successful cooperation is now an established fact. The records show a great increase in the number of cooperative projects between the U. S. Department of Agriculture and the State institutions. This development is most gratifying. Already it has demonstrated the value of cooperation in the investigation of certain types of problems.

The record at the close of the fiscal year 1927-28 showed that something over 900 active research projects were carried on in cooperation between experiment stations or with the Department of Agriculture. The total represented more than 13.5 per cent of the total number of projects at the experiment stations. This is an apparent gain of nearly 50 per cent during the year, which, however, may be in part due to more complete records of such activities. All of the experiment stations were involved, North Carolina, California, Minnesota, Montana, and Washington leading, with 46, 42, 38, 38, and 37 cooperative projects, respectively. The record indicates that 20 or more regional cooperative studies are in operation. Of these the work in corn improvement by 12 stations in the Corn Belt and that on the development of oil sprays by several northern and northwestern stations is especially outstanding.

A very large proportion of these cooperative undertakings include the collaboration of the Department of Agriculture. Generally speaking, organization and follow-up have been more systematic where this collaboration has existed than where the cooperation has been entirely between the stations themselves. In many cases the Department bureaus have supplied the initiative or have led to the projects being quite definitely outlined and organized from the start. The result, it is believed, has

^{1/}Presented at the Convention of the Association of Land-Grant Colleges and Universities, Washington, D. C., November 21, 1928.

emphasized some of the essential features of successful cooperation in research, pointing to the importance of a plan of operations and a considerable measure of coordination of the investigation under that plan.

While there has been some increase in the number of cooperative projects between individual stations, the development in that direction is less significant. It is still the opinion of the Joint Committee that the extension of cooperative endeavor in the solution of agricultural problems is a method of attack which needs to be enlarged. The logic and the advantage of cooperation have been set forth so often that they may not seem to need further recital, but there is evidence that cooperation and coordination do not always receive the attention from administrative officers that they deserve.

Cooperation in research assumes a problem in which various parties have a mutual interest and responsibility, and, furthermore, that each has some part essential to the investigation which it can contribute. The underlying idea is the combination of experience, viewpoint, and facilities, to promote better organized and more systematic plans for well-rounded investigation covering the subject and supplying a sufficiently broad basis of evidence. It is to economize effort and avoid unnecessary duplication on an independent basis, and to make the results of individual investigations comparable and supplementary.

One of the opportunities it offers is for utilizing more effectively the worker's qualities and aptitudes. Everyone recognizes there is considerable diversity in this respect, and various types of mind may find place in organized research, embodying teamwork. As a writer has said in describing the various types of persons in research: "Some are slow to notice a new line of inquiry, but will follow it grimly when put on the trail; others find the most trivial observation suggestive. Some enjoy the assimilation of previous work to be used as a foundation for their own; others for preference look forward. Some are experimentalists born, who appreciate the mere act of manipulation; others care only for the results thereof. Some have the patience for repeated observation without staleness or bias; repetition drives others to invention. Even the unimaginative can be used."

A wide variety of aptitudes is required in agricultural research, involving experience, manual dexterity, and practical knowledge, as well as mental ability and imagination; and in a great variety of cases these can be employed in collaborative enterprises to very great advantage, hastening the advance and greatly extending the reach which individuals could expect to attain working single-handed.

Too often, it is believed, workers are encouraged or passively permitted to carry on their experiments and investigations alone and without relation to the work of others, when their efforts might more profitably be joined with those of others either through definite cooperation or coordination. Naturally this is a matter which rests with the

director. He needs to consider how the work of his station can best be carried forward, and this naturally will involve the utilization of his force and facilities to best advantage, avoiding duplicating efforts of other stations, except on a considered plan, and taking the largest advantage of the results of their progress. Unless he realizes the opportunity and seeks constantly to apply it where it is advantageous, cooperation and coordination are likely to remain largely in abeyance as far as his station is concerned.

This committee had its origin in the research relations of the stations and the Federal Department of Agriculture. At present it is concerned no less with these relations than with those between the stations with respect to their investigations. A larger measure of coordination and correlation is regarded as one of the greatest needs of our agricultural research at the present time. This is not wholly a question whether or not investigators shall actively cooperate; it is a matter of relating investigation to that of the past and the present, so as to make it more definitely directed at the unsolved and unsettled features by means that are adequate. So far from being a question of subordination of individual initiative and independence, correlation is a challenge to originality. It is in accordance with the expectations and practices of research that investigation will be directed at topics which have not been solved or to points still in doubt. Confirmation and the elaboration of an idea imply rigorous and definitely directed inquiry--not unconsidered repetition and duplication.

We have in the field of agricultural research unusual means of keeping posted on the investigations under way and the reported results. The Classified List of Projects, compiled and issued by the Office of Experiment Stations, is an index of research activities. It lists by title every active project under way at the experiment stations, grouping these by subjects and with suitable cross references. The preparation of such a combined list is a quite laborious undertaking, possible only through the assistance of all the experiment stations in supplying current lists, and especially in making project titles as explicit and informing as possible. This publication deserves wide use, for it makes possible arrangements for cooperation and coordination and for relating new work to actual requirements of the subject and the locality.

Experiment Station Record furnishes a current survey, which now goes back forty years. It affords means, therefore, for keeping abreast of what is published in the general field of agricultural inquiry, and plans are under way for cooperating with Biological Abstracts in extending the review in the biological sciences. Contacts between workers through scientific meetings are far more intimate than formerly, which gives further opportunity for discussion of research and its progress.

Probably in no other field, therefore, are as full means at hand to enable the correlation of research efforts of all grades, so as to make the attack a systematized and progressive one. Such correlation has been largely voluntary and informal, but it is so essential to economy of effort and of funds that attention to it ought to be the concern of every administrative officer.

For the first time in the history of agricultural research there has been provided adequate machinery for inaugurating and carrying forward cooperation. With the appointment of the research committees, there has been provided an organization that can be utilized for developing a satisfactory system of cooperative investigation. It is apparent, however, that the successful development of this plan requires the earnest, intelligent, and sympathetic cooperation of the personnel. It is clear that without a desire to promote cooperation little can be accomplished. The chief factor in success is undoubtedly based on a willingness to cooperate. This, in a very large degree, is dependent on the personalities of workers. Where the desire to cooperate is lacking, the effort is unsatisfactory.

In spite of the encouraging numerical evidence of the growth of cooperation, considerable remains to be done in strengthening the cooperative movement and giving the various features more tangible form. In numerous instances the cooperation is rather loose and ineffective; it is lacking in organization and does not go much beyond a mutual understanding, without working agreements. Frequently it is quite informal, representing verbal agreements entered into between individuals, while in other cases there is little that binds the workers together in carrying out a common purpose.

Relatively few stations have embraced the national projects, especially in some of the newer lines. In the large majority of cases, investigators have set up projects of their own on independent and unrelated bases. In other cases the so-called cooperation is to a considerable extent a paper affair, with little coherence and with indefinite conformity to a working plan.

There is not yet the concerted effort which was looked for after these cooperative projects were outlined. Reliance has been placed to a large degree on the interest of individuals in cooperation, and care exercised not to transgress individual initiative. Apparently the subject has not been one with which administrative officers have concerned themselves very definitely as a matter of policy.

If these efforts at cooperation are to grow and to prove effective they deserve the active interest and support of administrative officers. It will not be sufficient to deal with them passively and leave matters wholly to individual workers. If the principle of cooperation and coordination is accepted, it will find increasing expression in connection with new projects when these are under consideration. Periodical attention to the station program also will be recognized as an opportune occasion for considering how the work and progress on general subjects fit into that of other stations, and the opportunity and advantage of making closer contacts.

As a group this great system--the Department of Agriculture and the State experiment stations, is still operating too independently and with too little regard for organized and related means of furthering research on common problems. The promotion of a larger measure of cooperation and coordination will depend in no small measure on the attitude of administrative officers.

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